

mation relating to, for example, a density of pedestrian traffic and a congestion level of a local data network.

[0019] Mobile cloud, which may be referred to also as mobile peer-to-peer network, **102**, is illustrated as comprising three mobiles **102a**, **102b** and **102c**. The mobiles may comprise cellular mobile telephones, laptop computers, tablet computers, personal digital assistant, PDA, devices or other electronic devices with wired and/or wireless communication capability. Mobile **102c** is illustrated as being in wireless communication with base station **103** via wireless link **23c**. Base station **103** may be configured to operate in accordance with a cellular radio access technology, such as long term evolution, LTE, wideband code division multiple access, WCDMA, or another technology.

[0020] Base station **103** may control a cell operating in accordance with the technology, and wireless link **23c** may operate in accordance with the technology. Wireless link **23c** may comprise an uplink for conveying information from mobile **102c** to base station **103**, and a downlink for conveying information from base station **103** to mobile **102c**. A user of mobile **102c** may access services of the cellular network where base station **103** is comprised in, via wireless link **23c**. In other words, the user may engage in cellular telephony, web browsing and/or other cellular services via wireless link **23c** and base station **103**. Base station **103** is operably connected, via connection **1034**, to a base station controller node or another cellular network node, which are not illustrated in FIG. 1. In some embodiments, such as for example in LTE systems, base station **103** may be connected to another base station.

[0021] In the mobile cloud, mobile **102c** is illustrated as being in communication with mobile **102b** via wireless connection **22bc**. Wireless connection **22bc** may operate in accordance with a different wireless communication technology than wireless connection **23c**. For example, wireless connection **22bc** may operate in accordance with the wireless local area network, WLAN, Bluetooth, or another technology. In some embodiments, wireless connection **22bc** operates using a same or a different cellular radio technology as wireless connection **23c**.

[0022] The mobile cloud may be maintained using wireless connections such as wireless connection **22bc** between mobiles comprised in the mobile cloud. Each mobile comprised in the mobile cloud may maintain a data structure comprising information relating to the mobile cloud. Information relating to the mobile cloud may comprise, for example, identities and capabilities of mobiles comprised in the cloud, information relating to radio paths between pairs of mobiles comprised in the mobile cloud and user preferences of mobiles comprised in the mobile cloud. The information, mobile cloud and wireless connections interconnecting the mobiles in the mobile cloud may together enable virtualization of at least some capabilities of mobiles **102a**, **102b** and **103c**. Virtualized capabilities may be indicated as available to other mobiles in the cloud, for example where mobile **102b** is temporarily outside cellular coverage of base station **103**, it may access the cellular communication capability of mobile **102c** to send a message using the cellular network, wherein the message is transferred via wireless connections **22bc** and **23c**, and connection **1034**. In this case, mobile **102c** may advertise a virtualized active cellular communication capability in the mobile cloud, enabling mobile **102b** to use it.

[0023] Alternatively to each mobile storing the information relating to the mobile cloud, at least one of the mobiles may at

least in part rely on at least one further mobile comprised in the mobile cloud to store the information relating to the mobile cloud. For example, the mobile cloud may designate one mobile as a lead node responsible for maintaining the information relating to the mobile cloud. In this example, when other mobiles need the information relating to the mobile cloud, they may be configured to request the relevant part, or all, of the information relating to the mobile cloud from the designated lead node.

[0024] Although only one wireless link **22bc** is illustrated connecting mobiles comprised in mobile cloud **102**, it is understood that mobiles comprised in the cloud may be capable of communicating with each other in general, using wireless links similar to wireless link **22bc**. Each mobile may not be capable of establishing a direct wireless link with each and every other mobile in the mobile cloud, but the mobile cloud may nonetheless be communicably bound in the sense that each mobile comprised in the mobile cloud may be capable of communicating with each other mobile comprised in the mobile cloud when messages are routed within the mobile cloud indirectly via mobiles comprised in the cloud.

[0025] In FIG. 1, wireless links **12ba**, **12bc** and **12cb** connect sensor nodes comprised in sensor network **101** to mobiles comprised in the mobile cloud **102**. In detail, wireless link **12ba** connects sensor node **101b** to mobile **102a**, wireless link **12bc** connects sensor node **101b** to mobile **102c** and wireless link **12cb** connects sensor node **101c** to mobile **102b**. Wireless links **12ba**, **12bc** and **12cb** may be based on the same, or different, radio access technologies than links, such as wireless link **22bc**, within mobile cloud **102**, and links, such as wireless link **23c**, between mobiles and cellular base stations. One example of a technology wireless links **12ba**, **12bc** and **12cb** may act in accordance with is near field communication, NFC. Another example is the Wibree low-power communication technology.

[0026] Mobile **102a**, for example, may request sensor data from sensor node **101b** over wireless link **12ba**. In detail, mobile **102a** may transmit a request message to sensor node **101b** over wireless link **12ba**. Responsively, sensor node **101b** may be configured to provide the requested sensor data, either over wireless link **12ba** or by transmitting over wireless link **12ba** information enabling mobile **102a** to access the requested sensor data. For example, where sensor node **101b** has uploaded sensor data to a server node using sensor interconnect network **101N**, sensor node **101b** may provide mobile **102a** information enabling mobile **102a** to access the sensor data from the server node. Such information may comprise an address of the server node and, optionally, credentials configured to allow access for mobile **102a** to the requested sensor data, for example. The information may also or alternatively comprise a data identifier identifying a specific set of sensor data stored in the server node from among a plurality of sensor data sets stored in the server node.

[0027] Mobile **102a** may request sensor data from sensor node **101b** over wireless link **12ba** even when the requested sensor data has not been sensed by sensor **101b**. In this case, sensor network **101** may communicate using the sensor interconnect network **101N** to discover, if a sensor is comprised in sensor network **101** that is capable of providing the requested sensor data. Responsive to such a sensor node being identified, the identified sensor node may provide the requested sensor data, or information enabling access to it, to mobile **102a** either via sensor interconnect **101N**, sensor node **101b** and wireless link **12ba**, or by opening a new, direct wireless